

Quadrature Hybrid, 175 - 350 MHz

Rev. V3

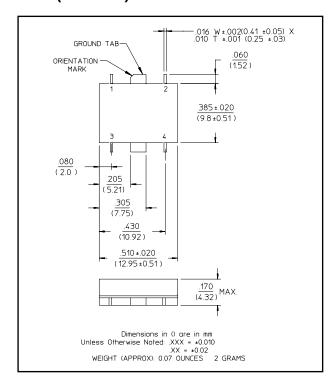
Features

- Fully Hermetic Package
- Octave Bandwidth
- Low VSWR: 1.2:1 Typical
- Impedance: 50 Ohms Nominal
- Input Power: 4 Watts Max.@ 25°C, Derated to 1 Watt @ 85°C
- MIL-STD-202 Screening Available

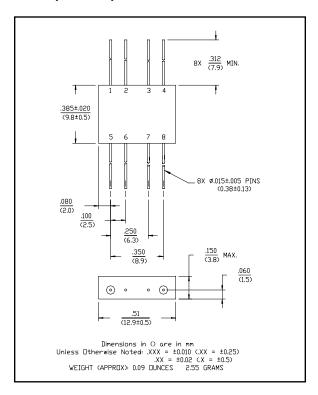
Description

3 dB Hybrids are ideal for dividing a signal into two signals of equal amplitude and a constant 90° or phase differential and for Quadrature combining or performing summation/differential combining.

SF-1 (JHS-136)



FP-2 (JH-136)



Pin Configuration (JH-136)

| Pin No. | Function | Pin No. | Function |
|---------|----------|---------|----------|
| 1 | А | 5 | D |
| 2 | GND | 6 | GND |
| 3 | GND | 7 | GND |
| 4 | В | 8 | С |

Pin Configuration (JHS-136)

| Pin No. | Function | Pin No. | Function |
|---------|----------|---------|----------|
| 1 | Α | 3 | D |
| 2 | В | 4 | С |

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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Visit www.macomtech.com for additional data sheets and product information.



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Electrical Specifications¹: $T_A = -55$ °C to +85°C

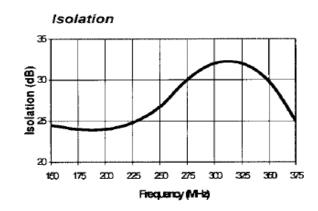
| Parameter | Test Conditions | Frequency | Units | Min | Тур | Max |
|------------------------------|-----------------|---------------|-------|-----|-----|-------|
| Insertion Loss ² | Less Coupling | 175 - 350 MHz | dB | _ | _ | 0.5 |
| Isolation | _ | 175 - 350 MHz | dB | 20 | _ | _ |
| Amplitude Balance | _ | 175 - 350 MHz | dB | _ | _ | 0.75 |
| VSWR | _ | 175 - 350 MHz | Ratio | _ | _ | 1.3:1 |
| Deviation from Quadrature | - | 175 - 350 MHz | 0 | _ | _ | 4 |

^{1.} All specifications apply with 50 ohm source and load impedance.

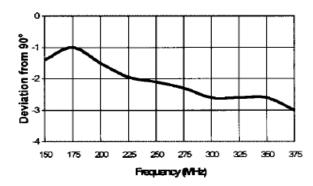
Phasing Diagram

| J S S | A | В | С | D |
|-------------|----------|----------|----------|----------|
| А | \times | ISO | 0° | -90° |
| В | ISO | \times | -90° | 0° |
| С | 0° | 90° | \times | ISO |
| D | -90° | 0° | ISO | \times |

Typical Performance Curves



Deviation from Quadrature



VSWR 1.3 1.2 1.1 1.50 175 200 225 250 275 300 325 360 375 Frequency (CHz)

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PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology
Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or restronger may be a ailable.

Commitment to produce in volume is not du

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^{2.} Average of coupled output less 3 dB.

This product contains elements protected by United States Patent Number 3,484,724

JH-/JHS-136

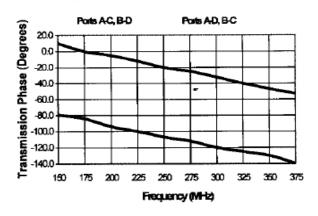


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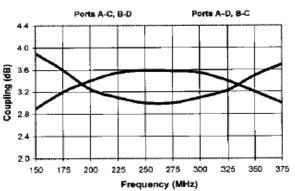
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Typical Performance Curves

Transmission Phase







Ordering Information

| Part Number | Package |
|-------------|---------|
| JH-136 PIN | FP-2 |
| JHS-136 PIN | SF-1 |

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